

BNL Groundwater Protection Group
Responses to NYSDEC/NYSDOH August 4, 2021 Comments on the June 1, 2021 Five-Year Review Report

Comment Number	Section/ Page	Comment	Response
NYSDEC Letter from B. Jankauskas to R. Gordon, dated August 4, 2021.			
The New York State Department of Environmental Conservation and the New York State Department of Health (Departments) have reviewed the 5-Year Review Report, dated June 1, 2021. The Departments provide the enclosed comments.			
1	Glossary	Include milestone, which is presented in various parts of the document. Most milestones are anticipated to be completed in the future, but some have past (e.g. ES stack and building 650 and Table 5-1 WSB and deeds). Table 9-1 has identified future milestones to be achieved.	The definition of milestone will be added to the glossary in future Five Year Reviews. It is a date when a significant point in a project is expected to occur. In most cases, it occurs in the future. However, Table 5-1 is a copy of the recommendations from the previous 2016 Five Year Review, and provides a status of whether those milestones were met.
2	Glossary	Operable Unit definition needs to be updated to include total number of Operable Units	Agreed, this will be updated in future Five Year Reviews.
3	Operable Unit Numbers	On May 11, 2021, BNL responded to a request to adjust Operable Unit numbers so they are the same with EPA and the State. At this time EPA has revised their Operable Unit numbers. This document should utilize the updated Operable Unit numbers.	Future Five Year Reviews will reflect the proposed OU designations in the attached Crosswalk. EPA will need to change their designations for three OUs based on the Crosswalk.
4	Private Wells	This document discusses the private wells that are sampled as part of the current monitoring program in multiple locations (e.g. pages 11, 14, 26, 63, 74, 77, 79). The discussion provided appears to imply that BNL is sampling the only private wells present within the area. Based on the recent private well sampling activities conducted near BNL, there are more private	Future Five Year Reviews will only include those properties still on private wells that declined DOE's original public water hook-up offer in 1996 to 1998. Two properties with private wells were

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		wells in the hook-up area than these private wells. This discussion should be revised for clarity and a discussion regarding some of the findings from the expanded private wells sampling should be included to indicate that this exposure pathway was evaluated particularly for 1,4 dioxane, which has been detected in the offsite groundwater and passes through the treatment systems.	connected to public water in 2017 and 2019 and are no longer part of this program. Currently there are four properties with five private wells sampled annually. Of the 75 other properties sampled during the recent SCDHS/BNL cooperative private well testing program, two of the properties (#18 and #117) are located within the hook-up area. Neither PFOS, PFOA, or 1,4-dioxane were detected in the sample from property #18, whereas a trace level of PFOA was detected in the sample from property #117.
5	Page 26[28], second paragraph	Indicates that 26 extraction wells are in operation, but Figure 4-1 shows 23 extraction wells. Verify/revise accordingly.	The text is correct, 26 extraction wells were operating in 2020. Figure 4-1 shows 24 extraction wells either in full time operation or pulsed pumping. Note that WSB extraction wells WSB-5 and WSB-6 only show one dot at this scale. Figure 4-1 should have included Airport extraction well RTW-2A and Building 96 RTW-2 as operating.
6	Page 32, OUV	Two localized areas of contamination remain in the Peconic River (PR-SS-38 and PR-SS-10) that contain mercury above the sediment cleanup goal indicated in the Record of Decision	Noted. To clarify, the ROD does not identify any “acceptable levels” of mercury in fish. As noted in

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		but was determined to be acceptable. Recently the DEC agreed that water and sediment sampling is no longer necessary, but continued fish sampling is necessary as fish concentrations have not reduced to acceptable levels.	Section 7.5 of the Five Year Review, BNL has completed the CERCLA post-cleanup monitoring of the River. However, under the BNL Environmental Surveillance Program, as river conditions and fish population/size allow, BNL will sample fish for mercury and PCBs in on-site portions of the Peconic River.
7	Page 47, WSB	Verify reference to 111-15 as Figure 6-6 shows results for 103-15, but the results are greater than five parts per billion for TVOC.	The reference to well 111-15 is correct, however it is not shown on Figure 6-6 trend graph. It will be added for future reports.
8	Page 49, BGRR	Indicates new well at leading edge of BRGG SR-90 plume was installed in September 2020 but is not shown on Figure 6-14. Update Figure 6-14 to show new monitoring well.	Agreed. The figure will be updated in future Five Year Reviews to include new sentinel well 095-326.
9	Page 75, OUV Monitoring	Should include fish monitoring/surveillance activities as these were performed.	Agreed. In 2018 and 2020, fish population assessments were conducted by BNL that determined sufficient fish were not available to support sampling. This is discussed in Section 6.4.5 and will also be included in this section in Future Five Year Reviews.
10	Section 10, OUII/OUVII	Suggest including a protectiveness statement for these OUs even if the activity was covered under a separate Record of Decision.	According to EPA, OU II/VII does not have its own protectiveness statement because the remedial action for this OU is covered under

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			the OU I, OU III, and g2/BLIP/USTs RODs.
11	Table 9-1	Include fish monitoring as discussed on Page 75 (Monitoring Optimization).	Annual fish population assessments/monitoring under the site Environmental Surveillance Program will be included under the recommendation table in future Five Year Reviews.
12	Figure 4-1	Verify operational status of Industrial Park extraction wells as each extraction well is in standby conditions but identified as operating.	The Industrial Park extraction wells are in standby mode. Figure 4-1 reflects that.

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Responses to SCDHS August 20, 2021 Comments on the June 1, 2021 Five-Year Review Report

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SCDHS Letter from J. Wanlass (SCDHS) R. Gordon (BHSO), dated August 20, 2021.			
I have reviewed the Brookhaven National Laboratory Five-Year Review Report and offer the following comments.			
1	Operable Unit VIII	Recent sampling has shown MCL exceedances of Per- and Polyfluoroalkyl Substances (PFAS) and 1-4 Dioxane. In light of this the Suffolk County Department of Health Services (SCDHS) recommends a comprehensive sampling plan in order to adequately characterize the extent of contamination. This comprehensive plan will allow for better protection of human health and the environment.	Agreed. Since 2017 BNL has proactively taken important steps in understanding the extent of PFOS, PFOA and 1,4-dioxane contamination. Prior to the addition of these compounds as Areas of Concern under the CERCLA Federal Facilities Agreement, BNL and DOE have secured different sources of funds to perform several phases of monitoring and characterization efforts, as well as construction of groundwater treatment systems for two PFAS source area plumes. These characterization and remediation efforts will significantly reduce the scope of the remaining Remedial Investigation work. As discussed during the monthly IAG teleconferences, BNL and DOE have been actively planning the preparation of the RI/FS Work Plan and subsequent characterization activities for the recently designated Operable Unit VIII.

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2	Private Well Program	Recent sampling activities have highlighted additional private wells with in the BNL hook-up area. SCDHS recommends the private well program narrative be revised and talk about the newly identified private wells and any possible exposure these new properties might encounter.	See response to NYSDEC/NYSDOH Comment 4.
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